

This document gives pertinent information concerning the reissuance of the VPDES Permit listed below. This permit is being processed as a Minor, Municipal permit. The discharge results from the operation of a 0.08 MGD wastewater treatment plant. This permit action consists of updating the WQS and boilerplate. The effluent limitations and special conditions contained in this permit will maintain the Water Quality Standards of 9 VAC 25-260-00 et seq.

1. Facility Name and Mailing Address: Rapidan Service Authority–
Town of Madison POTW
P.O. Box 148
Ruckersville, VA 22968
SIC Code : 4952 WWTP
Facility Location: 1033 Fishback Road
Madison, VA 22727
County: Madison
Facility Contact Name: Timothy Clemons
Telephone Number: (434)985-7811
2. Permit No.: VA0022845
Expiration Date of previous permit: 3/29/09
Other VPDES Permits associated with this facility: None
Other Permits associated with this facility: None
E2/E3/E4 Status: NA
3. Owner Name: Rapidan Service Authority
Owner Contact/Title: Dudley Pattie, General Manager
Telephone Number: (434)985-7811
4. Application Complete Date: 10/1/08
Permit Drafted By: Alison Thompson
Date Drafted: 4/15/09
Draft Permit Reviewed By: Joan Crowther
Date Reviewed: 4/20/09
Public Comment Period : Start Date: 6/18/09
End Date: 7/18/09
5. Receiving Waters Information: See Attachment 1 for the Flow Frequency Determination
Receiving Stream Name : Little Dark Run
Drainage Area at Outfall: 2.5 sq.mi.
River Mile: 2.12
Stream Basin: Rappahannock
Subbasin: none
Section: 4
Stream Class: III
Special Standards: none
Waterbody ID: VAN-E15R
7Q10 Low Flow: 0.0 MGD
7Q10 High Flow: 0.32 MGD
1Q10 Low Flow: 0.0 MGD
1Q10 High Flow: 0.25 MGD
Harmonic Mean Flow: 0.65 MGD
30Q5 Flow: 0.05 MGD
303(d) Listed: Yes
30Q10 Flow: 0.0 MGD
TMDL Approved: Yes
Date TMDL Approved: 12/12/05 - Bacteria
6. Statutory or Regulatory Basis for Special Conditions and Effluent Limitations:

<input checked="" type="checkbox"/> State Water Control Law	<input checked="" type="checkbox"/> EPA Guidelines
<input checked="" type="checkbox"/> Clean Water Act	<input checked="" type="checkbox"/> Water Quality Standards
<input checked="" type="checkbox"/> VPDES Permit Regulation	<input type="checkbox"/> Other
<input checked="" type="checkbox"/> EPA NPDES Regulation	
7. Licensed Operator Requirements: Class III
8. Reliability Class: Class II

9. Permit Characterization:

<input type="checkbox"/> Private	<input type="checkbox"/> Effluent Limited	<input type="checkbox"/> Possible Interstate Effect
<input type="checkbox"/> Federal	<input checked="" type="checkbox"/> Water Quality Limited	<input type="checkbox"/> Compliance Schedule Required
<input type="checkbox"/> State	<input type="checkbox"/> Toxics Monitoring Program Required	<input type="checkbox"/> Interim Limits in Permit
<input checked="" type="checkbox"/> POTW	<input type="checkbox"/> Pretreatment Program Required	<input type="checkbox"/> Interim Limits in Other Document
<input checked="" type="checkbox"/> TMDL		

10. Wastewater Sources and Treatment Description:

The Madison POTW consists of an influent manhole; a manually cleaned bar screen prior to a flow splitter which splits the flow to two parallel package plants. Each plant consists of an aerobic sludge digestion tank, an aeration basin, and a clarifier. Chlorination is used for disinfection; it is accomplished with a gaseous chlorine feed system and a chlorine contact tank. Sulfur Dioxide is used for dechlorination. The effluent flow is measured with a Parshall Flume and an ultrasonic meter. The effluent is post aerated prior to discharge to Little Dark Run.

Hydrated lime is added to each aeration basin at a rate of approximately 100 pounds per day for pH control and alkalinity replacement due to nitrification. Polymer is also being added to each clarifier as necessary by flow to aid in settling.

See the application in the 2009 reissuance file for a facility schematic/diagram.

TABLE 1 – Outfall Description

Outfall Number	Discharge Sources	Treatment	Design Flow	Outfall Latitude and Longitude
001	Domestic Wastewater	See Item 10 above.	0.08 MGD	38° 22' 48" 78° 14' 11"

See Attachment 2 for (Rapidan Quad, DEQ #185D) topographic map.

11. Sludge Treatment and Disposal Methods:

Waste sludge from the clarifiers is aerobically digested in a 16,000 gallon aerated sludge tank. The tank is decanted, with the supernatant returned to the head of the plant, and then the slightly thickened sludge is applied to one of the 5 sand drying beds. When the sludge is dry, it is manually removed and trucked to the Madison landfill for disposal.

12. Discharges, Intakes, Monitoring Stations, Other Items in Vicinity of Discharge

TABLE 2–Discharges, Intakes, Monitoring Stations, Other Items in Vicinity of Discharge

VA0087319	Town of Madison Water Treatment Plant Outfall 001 on White Oak Run.
VA0087696	Madison Wood Preservers
3-LDR003.19	DEQ Water Quality Monitoring Special Study Station 1.07 miles upstream from the Madison POTW discharge at Route 634 on Little Dark Run. River mile 3.19.
VA0022845	Town of Madison POTW Outfall 001. River mile 2.12.
3-LDR000.70	DEQ Ambient Water Quality Monitoring Station 1.42 miles downstream from the Madison POTW discharge at Route 680 on Little Dark Run. River mile 0.70.

13. Material Storage:

TABLE 3– Chemical Storage		
Materials Description	Volume Stored	Spill Prevention Measures
Hydrated Lime	Up to ten 50# bags	Stored indoors.
Polymer	One 5 gallon bucket	Stored indoors in a chemical room.
Chlorine Gas	Up to six 150# cylinders	Contained in a secure building with a leak detector
Sulphur Dioxide Gas	Up to six 150# cylinders	Contained in a secure building with a leak detector

14. Site Inspection:

Performed by DEQ Water Compliance on June 14, 2007. A copy of the inspection has been placed in the 2009 reissuance file.

15. Receiving Stream Water Quality and Water Quality Standards:a) Ambient Water Quality Data

The receiving stream, Little Dark Run, has a DEQ monitoring station located on it approximately 1.3 miles downstream of the Town of Madison discharge. The station is located in segment VAN-E15R-LDR01A00 which begins at the confluence with an unnamed tributary to Little Dark Run at river mile 2.17 and continues downstream until the confluence with Dark Run.

The receiving stream is listed as impaired for *E. coli* resulting in an impaired classification for the recreational use. A bacteria TMDL for Little Dark Run was completed and approved by US EPA on December 12, 2005. The aquatic life, fish consumption, and wildlife uses are considered fully supporting.

b) Receiving Stream Water Quality Criteria

Part IX of 9 VAC 25-260(360-550) designates classes and special standards applicable to defined Virginia river basins and sections. The receiving stream Little Dark Run is located within Section 4 of the Rappahannock River Basin, and classified as a Class III water.

At all times, Class III waters must achieve a dissolved oxygen (D.O.) of 4.0 mg/L or greater, a daily average D.O. of 5.0 mg/L or greater, a temperature that does not exceed 32°C, and maintain a pH of 6.0-9.0 standard units (S.U.).

Attachment 3 details other water quality criteria applicable to the receiving stream.

Ammonia:

Staff has reviewed the effluent data for pH and temperature and finds no significant differences from the data used to establish ammonia criteria and subsequent effluent limits in the current permit. Therefore, the previously established 90th percentile pH and temperature values will be carried forward as part of this reissuance process. The values as well as the derived criteria can be found in Attachment 3.

Madison personnel conducted pH and temperature monitoring downstream of the outfall once a month as required by the current permit. The 90th percentile pH was 6.7 s.u., and the 90th percentile temperature was 18.7°C for 2008.

Metals Criteria:

The 7Q10 of the receiving stream is zero, so in such cases the effluent data for hardness can be used to determine the metals criteria. The hardness-dependent metals criteria in Attachment 3 are based on an average effluent value of 218 mg/L. This data was obtained from the effluent monitoring reported on the monthly DMR; a printout of the DMR data is contained within the reissuance file.

Total Hardness monitoring was also conducted downstream of the outfall once a month for the duration of the permit. The average value was 51 mg/L in 2008.

Bacteria Criteria: The Virginia Water Quality Standards (9 VAC 25-260-170 B.) states sewage discharges shall be disinfected to achieve the following criteria:

- 1) *E. coli* bacteria per 100 ml of water shall not exceed the following:

	Geometric Mean ¹	Single Sample Maximum
Freshwater <i>E. coli</i> (N/100 ml)	126	235

¹For two or more samples [taken during any calendar month].

c) Receiving Stream Special Standards

The State Water Control Board's Water Quality Standards, River Basin Section Tables (9 VAC 25-260-360, 370 and 380) designates the river basins, sections, classes, and special standards for surface waters of the Commonwealth of Virginia. The receiving stream, Little Dark Run, is located within Section 4 of the Rappahannock Basin. This section has been designated with no special standards. Note: This section used to have the q and NEW-15 special standard designations, but both have been repealed.

d) Threatened or Endangered Species

The Virginia DGIF Fish and Wildlife Information System Database was searched for records to determine if there are threatened or endangered species in the vicinity of the discharge. No threatened or endangered species were identified. A copy of the printout has been placed in the reissuance file.

16. Antidegradation (9 VAC 25-260-30):

All state surface waters are provided one of three levels of antidegradation protection. For Tier 1 or existing use protection, existing uses of the water body and the water quality to protect these uses must be maintained. Tier 2 water bodies have water quality that is better than the water quality standards. Significant lowering of the water quality of Tier 2 waters is not allowed without an evaluation of the economic and social impacts. Tier 3 water bodies are exceptional waters and are so designated by regulatory amendment. The antidegradation policy prohibits new or expanded discharges into exceptional waters.

The receiving stream has been classified as Tier 1 based on the fact that the receiving stream has critical flows of zero and at times, the stream is comprised of only effluent. The effluent limits were written to meet the water quality criteria. Permit limits proposed have been established by determining wasteload allocations which will result in attaining and/or maintaining all water quality criteria which apply to the receiving stream, including narrative criteria. These wasteload allocations will provide for the protection and maintenance of all existing uses.

17. Effluent Screening, Wasteload Allocation, and Effluent Limitation Development :

To determine water quality-based effluent limitations for a discharge, the suitability of data must first be determined. Data is suitable for analysis if one or more representative data points is equal to or above the quantification level ("QL") and the data represent the exact pollutant being evaluated.

Next, the appropriate Water Quality Standards (WQS) are determined for the pollutants in the effluent. Then, the Wasteload Allocations (WLA) are calculated. In this case since the critical flows 7Q10 and 1Q10 have been determined to be zero, the WLA's are equal to the WQS. The WLA values are then compared with available effluent data to determine the need for effluent limitations. Effluent limitations are needed if the 97th percentile of the daily effluent concentration values is greater than the acute wasteload allocation or if the 97th percentile of the four-day average effluent concentration values is greater than the chronic wasteload allocation. Effluent limitations are based on the most limiting WLA, the required sampling frequency, and statistical characteristics of the effluent data.

a) Effluent Screening:

Effluent data obtained from the DMRs has been reviewed and determined to be suitable for evaluation. A printout of the effluent data has been placed in the reissuance file. The following pollutants require a wasteload allocation analysis: Ammonia as Nitrogen, Total Residual Chlorine, Copper, and Zinc.

b) Mixing Zones and Wasteload Allocations (WLAs):

Wasteload allocations (WLAs) are calculated for those parameters in the effluent with the reasonable potential to cause an exceedance of water quality criteria. The basic calculation for establishing a WLA is the steady state complete mix equation:

$$WLA = \frac{C_o [Q_e + (f)(Q_s)] - [(C_s)(f)(Q_s)]}{Q_e}$$

Where:

WLA	=	Wasteload allocation
C _o	=	In-stream water quality criteria
Q _e	=	Design flow
Q _s	=	Critical receiving stream flow (1Q10 for acute aquatic life criteria; 7Q10 for chronic aquatic life criteria; harmonic mean for carcinogen-human health criteria; 30Q10 for chronic ammonia aquatic life criteria; and 30Q5 for non-carcinogen human health criteria)
f	=	Decimal fraction of critical flow
C _s	=	Mean background concentration of parameter in the receiving stream.

The water segment receiving the discharge via Outfall 001 is considered to have a 7Q10 and 1Q10 of 0.0 MGD. As such, there is no mixing zone and the WLA is equal to the Water Quality Standard.

c) Effluent Limitations Toxic Pollutants, Outfall 001 –

9 VAC 25-31-220.D. requires limits be imposed where a discharge has a reasonable potential to cause or contribute to an in-stream excursion of water quality criteria. Those parameters with WLAs that are near effluent concentrations are evaluated for limits.

The VPDES Permit Regulation at 9 VAC 25-31-230.D. requires that monthly and weekly average limitations be imposed for continuous discharges from POTWs and monthly average and daily maximum limitations be imposed for all other continuous non-POTW discharges.

1) Ammonia as N:

DEQ guidance suggests using a sole data point of 9.0 mg/L for discharges containing domestic sewage to ensure the evaluation adequately addresses the potential for ammonia to be present in the discharge containing domestic sewage. Staff evaluated the new pH and temperature data for the effluent and has concluded it is not significantly different than what was used to derive the existing ammonia limits. The latest limit evaluation would allow a relaxation of the ammonia limits (Attachment 4), but since the facility was built to meet the existing limits and has been meeting the limits and antibacksliding could potentially be violated if the limits are relaxed, staff proposes to carry forward the existing limits for both summer and winter.

2) Total Residual Chlorine:

Chlorine is used for disinfection and is potentially in the discharge. Staff calculated WLAs for TRC using critical flows. In accordance with current DEQ guidance, staff used a default data point of 0.2 mg/L and the calculated WLAs to derive limits. A monthly average of 0.008 mg/L and a weekly average limit of 0.010 mg/L are proposed to be carried forward for this discharge (see Attachment 4).

3) Metals:

Staff set limits for total recoverable copper and zinc with the permit reissuance in 1999. During the 2004 reissuance, staff reevaluated the limits due to operational changes at the facility. Limits were still needed for zinc, but no limits were necessary for copper. The zinc limit was relaxed, and copper monitoring was kept in the permit.

Staff reviewed and analyzed the copper data collected during the current permit term. No limit is necessary; therefore, staff proposes to remove the copper monitoring with this reissuance.

This reissuance proposes to carry forward the total recoverable zinc limits and reduce the frequency of the total hardness monitoring to once per month.

See Attachment 4 for derivation of the limits.

d) Effluent Limitations and Monitoring, Outfall 001 – Conventional and Non-Conventional Pollutants

No changes to dissolved oxygen (D.O.), biochemical oxygen demand-5 day (BOD₅), total suspended solids (TSS), and pH limitations are proposed.

Dissolved Oxygen and BOD₅ limitations are based on the stream modeling conducted in March 1975 (Attachment 5) and are set to meet the water quality criteria for D.O. in the receiving stream.

It is staff's practice to equate the Total Suspended Solids limits with the BOD₅ limits. TSS limits are established to equal BOD₅ limits since the two pollutants are closely related in terms of treatment of domestic sewage.

pH limitations are set at the water quality criteria.

E. coli limitations are in accordance with the Water Quality Standards 9 VAC25-260-170.

e) Effluent Limitations and Monitoring Summary.

The effluent limitations are presented in the following table. Limits were established for Flow, BOD₅, Total Suspended Solids, Ammonia as Nitrogen, pH, Dissolved Oxygen, Total Residual Chlorine, Total Recoverable Zinc, and *E. coli*. Monitoring shall be carried forward for Total Hardness.

The limit for Total Suspended Solids is based on Best Professional Judgement.

The mass loading (kg/d) for monthly and weekly averages were calculated by multiplying the concentration values (mg/l), with the flow values (in MGD) and a conversion factor of 3.785.

Sample Type and Frequency are in accordance with the recommendations in the VPDES Permit Manual.

The VPDES Permit Regulation at 9 VAC 25-31-30 and 40 CFR Part 133 require that the facility achieve at least 85% removal for BOD/CBOD and TSS (or 65% for equivalent to secondary). The limits in this permit are water-quality-based effluent limits and result in greater than 85% removal.

18. Antibalancing:

All limits in this permit are at least as stringent as those previously established. Backsliding does not apply to this reissuance.

19. Effluent Limitations/Monitoring Requirements:

Design flow is 0.08 MGD.

Effective Dates: During the period beginning with the permit's effective date and lasting until the expiration date.

PARAMETER	BASIS FOR LIMITS	DISCHARGE LIMITATIONS				MONITORING REQUIREMENTS	
		Monthly Average	Weekly Average	Minimum	Maximum	Frequency	Sample Type
Flow (MGD)	NA	NL	NA	NA	NL	Continuous	TIRE
pH	3	NA	NA	6.0 S.U.	9.0 S.U.	1/D	Grab
BOD ₅	3,5	30 mg/L 9.1 kg/day	45 mg/L 14 kg/day	NA	NA	1/W	4H-C
Total Suspended Solids (TSS)	2	30 mg/L 9.1 kg/day	45 mg/L 14 kg/day	NA	NA	1/W	4H-C
Dissolved Oxygen	3,5	NA	NA	7.0 mg/L	NA	1/D	Grab
Ammonia as N (Dec-May)	3	15 mg/L	22 mg/L	NA	NA	1/W	4H-C
Ammonia as N (June-Nov)	3	3.5 mg/L	5.1 mg/L	NA	NA	1/W	4H-C
<i>E. coli</i> (Geometric Mean)	3	126 n/100mls	NA	NA	NA	1/2W	Grab
Total Residual Chlorine (after contact tank)	2, 3, 4	NA	NA	1.0 mg/L	NA	1/D	Grab
Total Residual Chlorine (after dechlorination)	3	0.008 mg/L	0.010 mg/L	NA	NA	1/D	Grab
Total Hardness	2	NL	NL	NA	NA	1/M	Grab
Zinc, Total Recoverable	3	234 µg/L	234 µg/L	NA	NA	1/3M	Grab

The basis for the limitations codes are:

- | | | |
|----------------------------------|---|---|
| 1. Federal Effluent Requirements | <i>MGD</i> = Million gallons per day. | <i>1/D</i> = Once every day. |
| 2. Best Professional Judgement | <i>NA</i> = Not applicable. | <i>1/M</i> = Once every month. |
| 3. Water Quality Standards | <i>NL</i> = No limit; monitor and report. | <i>1/W</i> = Once every week. |
| 4. DEQ Disinfection Guidance | <i>S.U.</i> = Standard units. | <i>1/3M</i> = Once every three months. |
| 5. Stream Model- Attachment 5 | <i>TIRE</i> = Totalizing, indicating and recording equipment. | <i>1/2W</i> = Once every two weeks >7 days apart. |

4H-C = A flow proportional composite sample collected manually or automatically, and discretely or continuously, for the entire discharge of the Monitored 4-hour period. Where discrete sampling is employed, the permittee shall collect a minimum of four (4) aliquots for compositing. Discrete sampling may be flow proportioned either by varying the time interval between each aliquot or the volume of each aliquot. Time composite samples consisting of a minimum four (4) grab samples obtained at hourly or smaller intervals may be collected where the permittee demonstrates that the discharge flow rate (gallons per minute) does not vary by $\geq 10\%$ or more during the monitored discharge.

Grab = An individual sample collected over a period of time not to exceed 15-minutes.

20. Other Permit Requirements :

- a) Part I.B. of the permit contains additional chlorine monitoring requirements, quantification levels and compliance reporting instructions.

A minimum chlorine residual must be maintained at the exit of the chlorine contact tank to assure adequate disinfection. No more than 10% of the monthly test results for TRC at the exit of the chlorine contact tank shall be < 1.0 mg/L with any TRC < 0.6 mg/L considered a system failure. Monitoring at numerous STPs has concluded that a TRC residual of 1.0 mg/L is an adequate indicator of compliance with the *E. coli* criteria. *E. coli* limits are defined in this section as well as monitoring requirements to take effect should an alternate means of disinfection be used.

9 VAC 25-31-190.L.4.c. requires an arithmetic mean for measurement averaging and 9 VAC 25-31-220.D. requires limits be imposed where a discharge has a reasonable potential to cause or contribute to an in-stream excursion of water quality criteria. Specific analytical methodologies for toxics are listed in this permit section as well as quantification levels (QLs) necessary to demonstrate compliance with applicable permit limitations or for use in future evaluations to determine if the pollutant has reasonable potential to cause or contribute to a violation. Required averaging methodologies are also specified.

- b) Permit Section Part I.C., details the requirements of a Pretreatment Program. The VPDES Permit Regulation at 9 VAC 25-31-210 requires monitoring and 9 VAC 25-31-220.D. requires all discharges to protect water quality. The VPDES Permit Regulation at 9 VAC 25-31-730. through 900., and 40 CFR Part 403 requires POTWs with a design flow of >5 MGD and receiving from Industrial Users (IUs) pollutants which pass through or interfere with the operation of the POTW or are otherwise subject to pretreatment standards to develop a pretreatment program. Also, the VPDES Permit Regulation at 9 VAC 25-31-280.B.9 requires that the Board provide an explanation on the regulation of users (i.e., industrial, indirect dischargers) to treatment works not owned by a state or a municipality.

The facility has conducted an annual survey during the current permit term. No Significant Industrial Users have ever been identified. Staff proposes to update the pretreatment language to reflect current agency guidance.

21. Other Special Conditions :

- a) 95% Capacity Reopener. The VPDES Permit Regulation at 9 VAC 25-31-200.B.2. requires all POTWs and PVOTWs develop and submit a plan of action to DEQ when the monthly average influent flow to their sewage treatment plant reaches 95% or more of the design capacity authorized in the permit for each month of any three consecutive month period. This facility is a POTW.
- b) Indirect Dischargers. Required by VPDES Permit Regulation, 9 VAC 25-31-280 B.9 for POTWs and PVOTWs that receive waste from someone other than the owner of the treatment works.
- c) O&M Manual Requirement. Required by Code of Virginia §62.1-44.19; Sewage Collection and Treatment Regulations, 9 VAC 25-790; VPDES Permit Regulation, 9 VAC 25-31-190.E. Within 90 days of the effective date of this permit, the permittee shall submit for approval an Operations and Maintenance (O&M) Manual or a statement confirming the accuracy and completeness of the current O&M Manual to the Department of Environmental Quality, Northern Regional Office (DEQ-NRO). Future changes to the facility must be addressed by the submittal of a revised O&M Manual within 90 days of the changes. Non-compliance with the O&M Manual shall be deemed a violation of the permit.
- d) CTC, CTO Requirement. The Code of Virginia § 62.1-44.19; Sewage Collection and Treatment Regulations, 9 VAC 25-790 requires that all treatment works treating wastewater obtain a Certificate to Construct prior to commencing construction and to obtain a Certificate to Operate prior to commencing operation of the treatment works.
- e) Licensed Operator Requirement. The Code of Virginia at §54.1-2300 et seq. and the VPDES Permit Regulation at 9 VAC 25-31-200 C, and Rules and Regulations for Waterworks and Wastewater Works Operators (18 VAC 160-20-10 et seq.) requires licensure of operators. This facility requires a Class III operator.
- f) Reliability Class. The Sewage Collection and Treatment Regulations at 9 VAC 25-790 require sewage treatment works to achieve a certain level of reliability in order to protect water quality and public health consequences in the event of component or system failure. Reliability means a measure of the ability of the treatment works to perform its designated function without failure or interruption of service. The facility is required to meet a reliability Class of II.
- g) Water Quality Criteria Reopener. The VPDES Permit Regulation at 9 VAC 25-31-220 D. requires establishment of effluent limitations to ensure attainment/maintenance of receiving stream water quality criteria. Should effluent monitoring indicate the need for any water quality-based limitations, this permit may be modified or alternatively revoked and reissued to incorporate appropriate limitations.

- h) Sludge Reopener. The VPDES Permit Regulation at 9 VAC 25-31-200.C.4. requires all permits issued to treatment works treating domestic sewage (including sludge-only facilities) include a reopener clause allowing incorporation of any applicable standard for sewage sludge use or disposal promulgated under Section 405(d) of the CWA. The facility includes a sewage treatment works.
- i) Sludge Use and Disposal. The VPDES Permit Regulation at 9 VAC 25-31-100.P., 220.B.2., and 420-720, and 40 CFR Part 503 require all treatment works treating domestic sewage to submit information on their sludge use and disposal practices and to meet specified standards for sludge use and disposal. The facility includes a treatment works treating domestic sewage.
- j) Treatment Works Closure Plan. The State Water Control Law §62.1-44.15:1.1, makes it illegal for an owner to cease operation and fail to implement a closure plan when failure to implement the plan would result in harm to human health or the environment. This condition is used to notify the owner of the need for a closure plan where a facility is being replaced or is expected to close.

Permit Section Part II. Part II of the permit contains standard conditions that appear in all VPDES Permits. In general, these standard conditions address the responsibilities of the permittee, reporting requirements, testing procedures and records retention.

23. Changes to the Permit from the Previously Issued Permit:

- a) Special Conditions:
 - 1) Chlorine demonstration language has been removed since the facility has demonstrated that chlorination is effective for *E. coli* removal.
 - 2) Instream monitoring has been removed since there have been no recent changes to the flow or treatment at this facility.
 - 3) A CTC/CTO special condition was added to the permit in accordance with the Permit Manual and the Sewage Collection and Treatment Regulations at 9 VAC 25-790.
 - 4) The Nutrient Enriched Waters reopener was removed from the permit since the NEW designation was repealed from the WQS special standards.
 - 5) Confirmation testing for outfall was removed.
 - 6) The Water Quality Standards Reopener was added to the permit in accordance with the Permit Manual.
 - 7) The Treatment Works Closure Plan Special Condition was added to the permit.
- b) Monitoring and Effluent Limitations:
 - 1) Temperature monitoring has been removed.
 - 2) The *E. coli* monitoring was reduced from once every week to once every two weeks.
 - 3) The frequency for total hardness monitoring was reduced to 1/M.
 - 4) Copper monitoring was removed since monitoring during the current permit demonstrated that no limits are necessary.
 - 5) All limits are now expressed as two significant figures.

24. Variances/Alternate Limits or Conditions:

None

25. Public Notice Information:

First Public Notice Date: 6/18/09

Second Public Notice Date: 6/25/09

Public Notice Information is required by 9 VAC 25-31-280 B. All pertinent information is on file and may be inspected, and copied by contacting the: DEQ Northern Regional Office, 13901 Crown Court, Woodbridge, VA 22193, Telephone No. (703) 583-3834, althompson@deq.virginia.gov. See Attachment 6 for a copy of the public notice document.

Persons may comment in writing or by email to the DEQ on the proposed permit action, and may request a public hearing, during the comment period. Comments shall include the name, address, and telephone number of the writer, and shall contain a complete, concise statement of the factual basis for comments. Only those comments received within this period will be considered. The DEQ may decide to hold a public hearing if public response is significant. Requests for public hearings shall state the reason why a hearing is requested, the nature of the issues proposed to be raised in the public hearing and a brief explanation of how the requester's interests would be directly and adversely affected by the proposed permit action. Following the comment period, the Board will make a determination regarding the proposed permit action. This determination will become effective, unless the DEQ grants a public hearing. Due notice of any public hearing will be given.

26. 303 (d) Listed Stream Segments and Total Max. Daily Loads (TMDL):

The receiving stream is listed as impaired for *E. coli* resulting in an impaired classification for the recreational use. A bacteria TMDL for Little Dark Run was completed and approved by US EPA on December 12, 2005. The aquatic life, fish consumption, and wildlife uses are considered fully supporting. The facility was given a waste load allocation of 2.21×10^{11} CFU/year for fecal coliform, and 1.39×10^{11} CFU/year for *E. coli*. Since the effluent limit is established at the Water Quality Standard, staff believes that the facility is not contributing to the impairment.

TMDL Reopener: This special condition is to allow the permit to reopened if necessary to bring it in compliance with any applicable TMDL that may be developed and approved for the receiving stream.

27. Additional Comments:

Previous Board Action: In 2004, the facility was referred to enforcement for failure to meet the final copper and zinc levels. Staff re-evaluated the limits with the 2004 reissuance and the limits were relaxed in accordance with the Antidegradation VPDES Regulation. The zinc limits were relaxed and the copper limits were removed. The facility has no active Consent Special Orders and has been in compliance with the final zinc limits.

Staff Comments: Permit reissuance delayed due to staff workload.

Public Comment: No comments were received during the public notice.

EPA Checklist: The checklist can be found in Attachment 7.

MEMORANDUM

DEPARTMENT OF ENVIRONMENTAL QUALITY - WATER DIVISION
 Water Quality Assessments and Planning
 629 E. Main Street P.O. Box 10009 Richmond, Virginia 23240

SUBJECT: Flow Frequency Determination
 RSA - Madison STP - #VA0022845

TO: James C. Engbert, VRO

FROM: Paul E. Herman, P.E., WQAP *Paul*

DATE: August 25, 1998

COPIES: Ron Gregory, Charles Martin, File

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Northern VA. Region
 Dept. of Env. Quality

This memo supercedes my September 30, 1993 memo to Raymond Jay concerning the subject VPDES permit.

The RSA - Madison STP discharges to the Little Dark Run near Madison, VA. Stream flow frequencies are required at this site by the permit writer for the purpose of calculating effluent limitations for the VPDES permit.

The USGS conducted several flow measurements on the Robinson River from 1950 to 1954, 1963, and 1981 to 1984. The measurements were made at the Route 231 bridge near Criglersville, VA. The measurements made by the USGS correlated very well with the same day daily mean values from two continuous record gages; one on the Hazel River at Rixeyville, VA (#01663500) and the second on the Rapidan River near Ruckersville, VA (#01665500). The measurements and daily mean values were plotted by the USGS on a logarithmic graph and a best fit line was drawn through the data points. The required flow frequencies from the reference gages were plotted on the regression line and the associated flow frequencies at the measurement site were determined from the graphs.

The flow frequencies at the discharge point were determined by using the values at the measurement site and adjusting them by proportional drainage areas. The data for the reference gages, the measurement site and the discharge point are presented below:

Rapidan River near Ruckersville, VA (#01665500):

Drainage Area = 114 mi²

1Q10 = 3.7 cfs	High Flow 1Q10 = 25 cfs
7Q10 = 4.4 cfs	High Flow 7Q10 = 29 cfs
30Q5 = 10 cfs	HM = 46 cfs

HF 30Q10 = 29 cfs

Hazel River at Rixeyville, VA (#01663500):

Drainage Area = 287 mi²
1Q10 = 4.3 cfs High Flow 1Q10 = 47 cfs
7Q10 = 5.9 cfs High Flow 7Q10 = 56 cfs
30Q5 = 19 cfs HM = 86 cfs

**Robinson River, at Route 231,
near Criglersville, VA (#01665850):**

Drainage Area = 47.8 mi²
1Q10 = 0.3 cfs High Flow 1Q10 = 7.2 cfs
7Q10 = 0.48 cfs High Flow 7Q10 = 9.5 cfs
30Q5 = 1.6 cfs HM = 19 cfs

Little Dark Run at discharge point:

Drainage Area = 2.52 mi² MGD
1Q10 = 0.02 cfs = $\frac{0.017926}{\text{MGD}}$ High Flow 1Q10 = 0.38 cfs = 0.245594
7Q10 = 0.03 cfs = $\frac{0.019369}{\text{MGD}}$ High Flow 7Q10 = 0.50 cfs = 0.32315
30Q5 = 0.08 cfs = $\frac{0.051704}{\text{MGD}}$ HM = 1.0 cfs = 0.6463

The high flow months are December through May.

Consideration should be given to the flow contributed to the Little Dark Run watershed by the Madison school discharges. This analysis does not address any discharges, withdrawals or springs which may influence the flow in the Little Dark Run upstream of the discharge point.

If there are any questions concerning this analysis, please let me know.

1.29.2004

Based on staff observations, critical flows for the summer months (June-November) have been determined to be 0.0 MGD.

4/15/09 30Q10 flows

30Q10 = 0 mgd based on drainage area

$$\begin{aligned} 30Q10 \text{ HF} &= \frac{29 \text{ cfs}}{114 \text{ mi}^2} = \frac{x}{2.52 \text{ mi}^2} \\ &= .64 \text{ cfs} \\ &= .41 \text{ mgd} \end{aligned}$$



FRESHWATER WATER QUALITY CRITERIA / WASTELOAD ALLOCATION ANALYSIS

Facility Name: Madison POTW

Permit No.: VA0022845

Receiving Stream: Little Dark Run

Version: OWP Guidance Memo 00-2011 (8/24/00)

Stream Information

Mean Hardness (as CaCO₃) = 51 mg/L
 90% Temperature (Annual) = 18.7 deg C
 90% Temperature (Wet season) = 14.1 deg C
 90% Maximum pH = 6.7 SU
 10% Maximum pH = SU
 Tier Designation (1 or 2) = 1
 Public Water Supply (PWS) Y/N? = n
 Trout Present Y/N? = n
 Early Life Stages Present Y/N? = y

Stream Flows

1Q10 (Annual) = 0 MGD
 7Q10 (Annual) = 0 MGD
 30Q10 (Annual) = 0 MGD
 1Q10 (Wet season) = 0.25 MGD
 30Q10 (Wet season) = 0.41 MGD
 30Q5 = 0.05 MGD
 Harmonic Mean = 0.65 MGD
 Annual Average = 0 MGD

Mixing Information

Annual - 1Q10 Mix = 100 %
 - 7Q10 Mix = 100 %
 - 30Q10 Mix = 100 %
 Wet Season - 1Q10 Mix = 100 %
 - 30Q10 Mix = 100 %

Effluent Information

Mean Hardness (as CaCO₃) = 218 mg/L
 90% Temp (Annual) = 20 deg C
 90% Temp (Wet season) = 13 deg C
 90% Maximum pH = 7.1 SU
 10% Maximum pH = SU
 Discharge Flow = 0.08 MGD

Attachment 3

Parameter (ug/l unless noted)	Background Conc.	Water Quality Criteria				Wasteload Allocations				Antidegradation Baseline				Antidegradation Allocations				Most Limiting Allocations			
		Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH
Acenaphthene	0	--	--	na	2.7E+03	--	--	na	4.4E+03	--	--	--	--	--	--	--	--	--	--	na	4.4E+03
Acrolein	0	--	--	na	7.8E+02	--	--	na	1.3E+03	--	--	--	--	--	--	--	--	--	--	na	1.3E+03
Acrylonitrile ^c	0	--	--	na	6.6E+00	--	--	na	6.0E+01	--	--	--	--	--	--	--	--	--	--	na	6.0E+01
Aldrin ^c	0	3.0E+00	--	na	1.4E-03	3.0E+00	--	na	1.3E-02	--	--	--	--	--	--	--	--	3.0E+00	--	na	1.3E-02
Ammonia-N (mg/l) (Yearly)	0	3.29E+01	3.98E+00	na	--	3.3E+01	4.0E+00	na	--	--	--	--	--	--	--	--	--	3.3E+01	4.0E+00	na	--
Ammonia-N (mg/l) (High Flow)	0	4.28E+01	6.38E+00	na	--	1.8E+02	3.9E+01	na	--	--	--	--	--	--	--	--	--	1.8E+02	3.9E+01	na	--
Anthracene	0	--	--	na	1.1E+05	--	--	na	1.8E+05	--	--	--	--	--	--	--	--	--	--	na	1.8E+05
Antimony	0	--	--	na	4.3E+03	--	--	na	7.0E+03	--	--	--	--	--	--	--	--	--	--	na	7.0E+03
Arsenic	0	3.4E+02	1.5E+02	na	--	3.4E+02	1.5E+02	na	--	--	--	--	--	--	--	--	--	3.4E+02	1.5E+02	na	--
Barium	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Benzene ^c	0	--	--	na	7.1E+02	--	--	na	6.5E+03	--	--	--	--	--	--	--	--	--	--	na	6.5E+03
Benzidine ^c	0	--	--	na	5.4E-03	--	--	na	4.9E-02	--	--	--	--	--	--	--	--	--	--	na	4.9E-02
Benzo (a) anthracene ^c	0	--	--	na	4.9E-01	--	--	na	4.5E+00	--	--	--	--	--	--	--	--	--	--	na	4.5E+00
Benzo (b) fluoranthene ^c	0	--	--	na	4.9E-01	--	--	na	4.5E+00	--	--	--	--	--	--	--	--	--	--	na	4.5E+00
Benzo (k) fluoranthene ^c	0	--	--	na	4.9E-01	--	--	na	4.5E+00	--	--	--	--	--	--	--	--	--	--	na	4.5E+00
Benzo (a) pyrene ^c	0	--	--	na	4.9E-01	--	--	na	4.5E+00	--	--	--	--	--	--	--	--	--	--	na	4.5E+00
Bis(2-Chloroethyl) Ether	0	--	--	na	1.4E+01	--	--	na	2.3E+01	--	--	--	--	--	--	--	--	--	--	na	2.3E+01
Bis(2-Chloroisopropyl) Ether	0	--	--	na	1.7E+05	--	--	na	2.8E+05	--	--	--	--	--	--	--	--	--	--	na	2.8E+05
Bromoform ^c	0	--	--	na	3.6E+03	--	--	na	3.3E+04	--	--	--	--	--	--	--	--	--	--	na	3.3E+04
Butylbenzylphthalate	0	--	--	na	5.2E+03	--	--	na	8.5E+03	--	--	--	--	--	--	--	--	--	--	na	8.5E+03
Cadmium	0	9.4E+00	2.1E+00	na	--	9.4E+00	2.1E+00	na	--	--	--	--	--	--	--	--	--	9.4E+00	2.1E+00	na	--
Carbon Tetrachloride ^c	0	--	--	na	4.4E+01	--	--	na	4.0E+02	--	--	--	--	--	--	--	--	--	--	na	4.0E+02
Chlordane ^c	0	2.4E+00	4.3E-03	na	2.2E-02	2.4E+00	4.3E-03	na	2.0E-01	--	--	--	--	--	--	--	--	2.4E+00	4.3E-03	na	2.0E-01
Chloride	0	8.6E+05	2.3E+05	na	--	8.6E+05	2.3E+05	na	--	--	--	--	--	--	--	--	--	8.6E+05	2.3E+05	na	--
TRC	0	1.9E+01	1.1E+01	na	--	1.9E+01	1.1E+01	na	--	--	--	--	--	--	--	--	--	1.9E+01	1.1E+01	na	--
Chlorobenzene	0	--	--	na	2.1E+04	--	--	na	3.4E+04	--	--	--	--	--	--	--	--	--	--	na	3.4E+04

Parameter (ug/l unless noted)	Background Conc.	Water Quality Criteria				Wasteload Allocations				Antidegradation Baseline				Antidegradation Allocations				Most Limiting Allocations			
		Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH
Chlorodibromomethane ^c	0	--	--	na	3.4E+02	--	--	na	3.1E+03	--	--	--	--	--	--	--	--	--	--	na	3.1E+03
Chloroform ^c	0	--	--	na	2.9E+04	--	--	na	2.6E+05	--	--	--	--	--	--	--	--	--	--	na	2.6E+05
2-Chloronaphthalene	0	--	--	na	4.3E+03	--	--	na	7.0E+03	--	--	--	--	--	--	--	--	--	--	na	7.0E+03
2-Chlorophenol	0	--	--	na	4.0E+02	--	--	na	6.5E+02	--	--	--	--	--	--	--	--	--	--	na	6.5E+02
Chlorpyrifos	0	8.3E-02	4.1E-02	na	--	8.3E-02	4.1E-02	na	--	--	--	--	--	--	--	--	--	8.3E-02	4.1E-02	na	--
Chromium III	0	1.1E+03	1.4E+02	na	--	1.1E+03	1.4E+02	na	--	--	--	--	--	--	--	--	--	1.1E+03	1.4E+02	na	--
Chromium VI	0	1.6E+01	1.1E+01	na	--	1.6E+01	1.1E+01	na	--	--	--	--	--	--	--	--	--	1.6E+01	1.1E+01	na	--
Chromium, Total	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Chrysene ^c	0	--	--	na	4.9E-01	--	--	na	4.5E+00	--	--	--	--	--	--	--	--	--	--	na	4.5E+00
Copper	0	2.8E+01	1.7E+01	na	--	2.8E+01	1.7E+01	na	--	--	--	--	--	--	--	--	--	2.8E+01	1.7E+01	na	--
Cyanide	0	2.2E+01	5.2E+00	na	2.2E+05	2.2E+01	5.2E+00	na	3.5E+05	--	--	--	--	--	--	--	--	2.2E+01	5.2E+00	na	3.5E+05
DDD ^c	0	--	--	na	8.4E-03	--	--	na	7.7E-02	--	--	--	--	--	--	--	--	--	--	na	7.7E-02
DDE ^c	0	--	--	na	5.9E-03	--	--	na	5.4E-02	--	--	--	--	--	--	--	--	--	--	na	5.4E-02
DDT ^c	0	1.1E+00	1.0E-03	na	5.9E-03	1.1E+00	1.0E-03	na	5.4E-02	--	--	--	--	--	--	--	--	1.1E+00	1.0E-03	na	5.4E-02
Demeton	0	--	1.0E-01	na	--	--	1.0E-01	na	--	--	--	--	--	--	--	--	--	--	1.0E-01	na	--
Dibenz(a,h)anthracene ^c	0	--	--	na	4.9E-01	--	--	na	4.5E+00	--	--	--	--	--	--	--	--	--	--	na	4.5E+00
Dibutyl phthalate	0	--	--	na	1.2E+04	--	--	na	2.0E+04	--	--	--	--	--	--	--	--	--	--	na	2.0E+04
Dichloromethane (Methylene Chloride) ^c	0	--	--	na	1.6E+04	--	--	na	1.5E+05	--	--	--	--	--	--	--	--	--	--	na	1.5E+05
1,2-Dichlorobenzene	0	--	--	na	1.7E+04	--	--	na	2.8E+04	--	--	--	--	--	--	--	--	--	--	na	2.8E+04
1,3-Dichlorobenzene	0	--	--	na	2.6E+03	--	--	na	4.2E+03	--	--	--	--	--	--	--	--	--	--	na	4.2E+03
1,4-Dichlorobenzene	0	--	--	na	2.6E+03	--	--	na	4.2E+03	--	--	--	--	--	--	--	--	--	--	na	4.2E+03
3,3-Dichlorobenzidine ^c	0	--	--	na	7.7E-01	--	--	na	7.0E+00	--	--	--	--	--	--	--	--	--	--	na	7.0E+00
Dichlorobromomethane ^c	0	--	--	na	4.6E+02	--	--	na	4.2E+03	--	--	--	--	--	--	--	--	--	--	na	4.2E+03
1,2-Dichloroethane ^c	0	--	--	na	9.9E+02	--	--	na	9.0E+03	--	--	--	--	--	--	--	--	--	--	na	9.0E+03
1,1-Dichloroethylene	0	--	--	na	1.7E+04	--	--	na	2.8E+04	--	--	--	--	--	--	--	--	--	--	na	2.8E+04
1,2-trans-dichloroethylene	0	--	--	na	1.4E+05	--	--	na	2.3E+05	--	--	--	--	--	--	--	--	--	--	na	2.3E+05
2,4-Dichlorophenol	0	--	--	na	7.9E+02	--	--	na	1.3E+03	--	--	--	--	--	--	--	--	--	--	na	1.3E+03
2,4-Dichlorophenoxy acetic acid (2,4-D)	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
1,2-Dichloropropane ^c	0	--	--	na	3.9E+02	--	--	na	3.6E+03	--	--	--	--	--	--	--	--	--	--	na	3.6E+03
1,3-Dichloropropene	0	--	--	na	1.7E+03	--	--	na	2.8E+03	--	--	--	--	--	--	--	--	--	--	na	2.8E+03
Dieldrin ^c	0	2.4E-01	5.6E-02	na	1.4E-03	2.4E-01	5.6E-02	na	1.3E-02	--	--	--	--	--	--	--	--	2.4E-01	5.6E-02	na	1.3E-02
Diethyl Phthalate	0	--	--	na	1.2E+05	--	--	na	2.0E+05	--	--	--	--	--	--	--	--	--	--	na	2.0E+05
Di-2-Ethylhexyl Phthalate ^c	0	--	--	na	5.9E+01	--	--	na	5.4E+02	--	--	--	--	--	--	--	--	--	--	na	5.4E+02
2,4-Dimethylphenol	0	--	--	na	2.3E+03	--	--	na	3.7E+03	--	--	--	--	--	--	--	--	--	--	na	3.7E+03
Dimethyl Phthalate	0	--	--	na	2.9E+06	--	--	na	4.7E+06	--	--	--	--	--	--	--	--	--	--	na	4.7E+06
Di-n-Butyl Phthalate	0	--	--	na	1.2E+04	--	--	na	2.0E+04	--	--	--	--	--	--	--	--	--	--	na	2.0E+04
2,4 Dinitrophenol	0	--	--	na	1.4E+04	--	--	na	2.3E+04	--	--	--	--	--	--	--	--	--	--	na	2.3E+04
2-Methyl-4,6-Dinitrophenol	0	--	--	na	7.65E+02	--	--	na	1.2E+03	--	--	--	--	--	--	--	--	--	--	na	1.2E+03
2,4-Dinitrotoluene ^c	0	--	--	na	9.1E+01	--	--	na	8.3E+02	--	--	--	--	--	--	--	--	--	--	na	8.3E+02
Dioxin (2,3,7,8- tetrachlorodibenzo-p-dioxin) (ppq)	0	--	--	na	1.2E-06	--	--	na	na	--	--	--	--	--	--	--	--	--	--	na	na
1,2-Diphenylhydrazine ^c	0	--	--	na	5.4E+00	--	--	na	4.9E+01	--	--	--	--	--	--	--	--	--	--	na	4.9E+01
Alpha-Endosulfan	0	2.2E-01	5.6E-02	na	2.4E+02	2.2E-01	5.6E-02	na	3.9E+02	--	--	--	--	--	--	--	--	2.2E-01	5.6E-02	na	3.9E+02
Beta-Endosulfan	0	2.2E-01	5.6E-02	na	2.4E+02	2.2E-01	5.6E-02	na	3.9E+02	--	--	--	--	--	--	--	--	2.2E-01	5.6E-02	na	3.9E+02
Endosulfan Sulfate	0	--	--	na	2.4E+02	--	--	na	3.9E+02	--	--	--	--	--	--	--	--	--	--	na	3.9E+02
Endrin	0	8.6E-02	3.6E-02	na	8.1E-01	8.6E-02	3.6E-02	na	1.3E+00	--	--	--	--	--	--	--	--	8.6E-02	3.6E-02	na	1.3E+00
Endrin Aldehyde	0	--	--	na	8.1E-01	--	--	na	1.3E+00	--	--	--	--	--	--	--	--	--	--	na	1.3E+00

Parameter (ug/l unless noted)	Background Conc.	Water Quality Criteria				Wasteload Allocations				Antidegradation Baseline				Antidegradation Allocations				Most Limiting Allocations			
		Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH
Ethylbenzene	0	--	--	na	2.9E+04	--	--	na	4.7E+04	--	--	--	--	--	--	--	--	--	--	na	4.7E+04
Fluoranthene	0	--	--	na	3.7E+02	--	--	na	6.0E+02	--	--	--	--	--	--	--	--	--	--	na	6.0E+02
Fluorene	0	--	--	na	1.4E+04	--	--	na	2.3E+04	--	--	--	--	--	--	--	--	--	--	na	2.3E+04
Foaming Agents	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Guthion	0	--	1.0E-02	na	--	--	1.0E-02	na	--	--	--	--	--	--	--	--	--	--	1.0E-02	na	--
Heptachlor ^C	0	5.2E-01	3.8E-03	na	2.1E-03	5.2E-01	3.8E-03	na	1.9E-02	--	--	--	--	--	--	--	--	5.2E-01	3.8E-03	na	1.9E-02
Heptachlor Epoxide ^C	0	5.2E-01	3.8E-03	na	1.1E-03	5.2E-01	3.8E-03	na	1.0E-02	--	--	--	--	--	--	--	--	5.2E-01	3.8E-03	na	1.0E-02
Hexachlorobenzene ^C	0	--	--	na	7.7E-03	--	--	na	7.0E-02	--	--	--	--	--	--	--	--	--	--	na	7.0E-02
Hexachlorobutadiene ^C	0	--	--	na	5.0E+02	--	--	na	4.6E+03	--	--	--	--	--	--	--	--	--	--	na	4.6E+03
Hexachlorocyclohexane																					
Alpha-BHC ^C	0	--	--	na	1.3E-01	--	--	na	1.2E+00	--	--	--	--	--	--	--	--	--	--	na	1.2E+00
Hexachlorocyclohexane																					
Beta-BHC ^C	0	--	--	na	4.6E-01	--	--	na	4.2E+00	--	--	--	--	--	--	--	--	--	--	na	4.2E+00
Hexachlorocyclohexane																					
Gamma-BHC ^C (Lindane)	0	9.5E-01	na	na	6.3E-01	9.5E-01	--	na	5.7E+00	--	--	--	--	--	--	--	--	9.5E-01	--	na	5.7E+00
Hexachlorocyclopentadiene	0	--	--	na	1.7E+04	--	--	na	2.8E+04	--	--	--	--	--	--	--	--	--	--	na	2.8E+04
Hexachloroethane ^C	0	--	--	na	8.9E+01	--	--	na	8.1E+02	--	--	--	--	--	--	--	--	--	--	na	8.1E+02
Hydrogen Sulfide	0	--	2.0E+00	na	--	--	2.0E+00	na	--	--	--	--	--	--	--	--	--	--	2.0E+00	na	--
Indeno (1,2,3-cd) pyrene ^C	0	--	--	na	4.9E-01	--	--	na	4.5E+00	--	--	--	--	--	--	--	--	--	--	na	4.5E+00
Iron	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Isophorone ^C	0	--	--	na	2.6E+04	--	--	na	2.4E+05	--	--	--	--	--	--	--	--	--	--	na	2.4E+05
Kepone	0	--	0.0E+00	na	--	--	0.0E+00	na	--	--	--	--	--	--	--	--	--	--	0.0E+00	na	--
Lead	0	3.2E+02	3.6E+01	na	--	3.2E+02	3.6E+01	na	--	--	--	--	--	--	--	--	--	3.2E+02	3.6E+01	na	--
Malathion	0	--	1.0E-01	na	--	--	1.0E-01	na	--	--	--	--	--	--	--	--	--	--	1.0E-01	na	--
Manganese	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Mercury	0	1.4E+00	7.7E-01	na	5.1E-02	1.4E+00	7.7E-01	na	8.3E-02	--	--	--	--	--	--	--	--	1.4E+00	7.7E-01	na	8.3E-02
Methyl Bromide	0	--	--	na	4.0E+03	--	--	na	6.5E+03	--	--	--	--	--	--	--	--	--	--	na	6.5E+03
Methoxychlor	0	--	3.0E-02	na	--	--	3.0E-02	na	--	--	--	--	--	--	--	--	--	--	3.0E-02	na	--
Mirex	0	--	0.0E+00	na	--	--	0.0E+00	na	--	--	--	--	--	--	--	--	--	--	0.0E+00	na	--
Monochlorobenzene	0	--	--	na	2.1E+04	--	--	na	3.4E+04	--	--	--	--	--	--	--	--	--	--	na	3.4E+04
Nickel	0	3.5E+02	3.9E+01	na	4.6E+03	3.5E+02	3.9E+01	na	7.5E+03	--	--	--	--	--	--	--	--	3.5E+02	3.9E+01	na	7.5E+03
Nitrate (as N)	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Nitrobenzene	0	--	--	na	1.9E+03	--	--	na	3.1E+03	--	--	--	--	--	--	--	--	--	--	na	3.1E+03
N-Nitrosodimethylamine ^C	0	--	--	na	8.1E+01	--	--	na	7.4E+02	--	--	--	--	--	--	--	--	--	--	na	7.4E+02
N-Nitrosodiphenylamine ^C	0	--	--	na	1.6E+02	--	--	na	1.5E+03	--	--	--	--	--	--	--	--	--	--	na	1.5E+03
N-Nitrosodi-n-propylamine ^C	0	--	--	na	1.4E+01	--	--	na	1.3E+02	--	--	--	--	--	--	--	--	--	--	na	1.3E+02
Parathion	0	6.5E-02	1.3E-02	na	--	6.5E-02	1.3E-02	na	--	--	--	--	--	--	--	--	--	6.5E-02	1.3E-02	na	--
PCB-1016	0	--	1.4E-02	na	--	--	1.4E-02	na	--	--	--	--	--	--	--	--	--	--	1.4E-02	na	--
PCB-1221	0	--	1.4E-02	na	--	--	1.4E-02	na	--	--	--	--	--	--	--	--	--	--	1.4E-02	na	--
PCB-1232	0	--	1.4E-02	na	--	--	1.4E-02	na	--	--	--	--	--	--	--	--	--	--	1.4E-02	na	--
PCB-1242	0	--	1.4E-02	na	--	--	1.4E-02	na	--	--	--	--	--	--	--	--	--	--	1.4E-02	na	--
PCB-1248	0	--	1.4E-02	na	--	--	1.4E-02	na	--	--	--	--	--	--	--	--	--	--	1.4E-02	na	--
PCB-1254	0	--	1.4E-02	na	--	--	1.4E-02	na	--	--	--	--	--	--	--	--	--	--	1.4E-02	na	--
PCB-1260	0	--	1.4E-02	na	--	--	1.4E-02	na	--	--	--	--	--	--	--	--	--	--	1.4E-02	na	--
PCB Total ^C	0	--	--	na	1.7E-03	--	--	na	1.6E-02	--	--	--	--	--	--	--	--	--	--	na	1.6E-02

Parameter (ug/l unless noted)	Background Conc.	Water Quality Criteria				Wasteload Allocations				Antidegradation Baseline				Antidegradation Allocations				Most Limiting Allocations			
		Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH
Pentachlorophenol ^C	0	7.7E-03	5.9E-03	na	8.2E+01	7.7E-03	5.9E-03	na	7.5E+02	--	--	--	--	--	--	--	--	7.7E-03	5.9E-03	na	7.5E+02
Phenol	0	--	--	na	4.6E+06	--	--	na	7.5E+06	--	--	--	--	--	--	--	--	--	--	na	7.5E+06
Pyrene	0	--	--	na	1.1E+04	--	--	na	1.8E+04	--	--	--	--	--	--	--	--	--	--	na	1.8E+04
Radionuclides (pCi/l except Beta/Photon)	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Gross Alpha Activity Beta and Photon Activity (mrem/yr)	0	--	--	na	1.5E+01	--	--	na	2.4E+01	--	--	--	--	--	--	--	--	--	--	na	2.4E+01
Strontium-90	0	--	--	na	4.0E+00	--	--	na	6.5E+00	--	--	--	--	--	--	--	--	--	--	na	6.5E+00
Tritium	0	--	--	na	8.0E+00	--	--	na	1.3E+01	--	--	--	--	--	--	--	--	--	--	na	1.3E+01
Selenium	0	2.0E+01	5.0E+00	na	1.1E+04	2.0E+01	5.0E+00	na	1.8E+04	--	--	--	--	--	--	--	--	2.0E+01	5.0E+00	na	1.8E+04
Silver	0	1.3E+01	--	na	--	1.3E+01	--	na	--	--	--	--	--	--	--	--	--	1.3E+01	--	na	--
Sulfate	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
1,1,2,2-Tetrachloroethane ^C	0	--	--	na	1.1E+02	--	--	na	1.0E+03	--	--	--	--	--	--	--	--	--	--	na	1.0E+03
Tetrachloroethylene ^C	0	--	--	na	8.9E+01	--	--	na	8.1E+02	--	--	--	--	--	--	--	--	--	--	na	8.1E+02
Thallium	0	--	--	na	6.3E+00	--	--	na	1.0E+01	--	--	--	--	--	--	--	--	--	--	na	1.0E+01
Toluene	0	--	--	na	2.0E+05	--	--	na	3.3E+05	--	--	--	--	--	--	--	--	--	--	na	3.3E+05
Total dissolved solids	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Toxaphene ^C	0	7.3E-01	2.0E-04	na	7.5E-03	7.3E-01	2.0E-04	na	6.8E-02	--	--	--	--	--	--	--	--	7.3E-01	2.0E-04	na	6.8E-02
Tributyltin	0	4.6E-01	6.3E-02	na	--	4.6E-01	6.3E-02	na	--	--	--	--	--	--	--	--	--	4.6E-01	6.3E-02	na	--
1,2,4-Trichlorobenzene	0	--	--	na	9.4E+02	--	--	na	1.5E+03	--	--	--	--	--	--	--	--	--	--	na	1.5E+03
1,1,2-Trichloroethane ^C	0	--	--	na	4.2E+02	--	--	na	3.8E+03	--	--	--	--	--	--	--	--	--	--	na	3.8E+03
Trichloroethylene ^C	0	--	--	na	8.1E+02	--	--	na	7.4E+03	--	--	--	--	--	--	--	--	--	--	na	7.4E+03
2,4,6-Trichlorophenol ^C	0	--	--	na	6.5E+01	--	--	na	5.9E+02	--	--	--	--	--	--	--	--	--	--	na	5.9E+02
2-(2,4,5-Trichlorophenoxy) propionic acid (Silvex)	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Vinyl Chloride ^C	0	--	--	na	6.1E+01	--	--	na	5.6E+02	--	--	--	--	--	--	--	--	--	--	na	5.6E+02
Zinc	0	2.3E+02	2.3E+02	na	6.9E+04	2.3E+02	2.3E+02	na	1.1E+05	--	--	--	--	--	--	--	--	2.3E+02	2.3E+02	na	1.1E+05

Notes:

- All concentrations expressed as micrograms/liter (ug/l), unless noted otherwise
- Discharge flow is highest monthly average or Form 2C maximum for Industries and design flow for Municipals
- Metals measured as Dissolved, unless specified otherwise
- "C" indicates a carcinogenic parameter
- Regular WLAs are mass balances (minus background concentration) using the % of stream flow entered above under Mixing Information.
Antidegradation WLAs are based upon a complete mix.
- Antideg. Baseline = (0.25(WQC - background conc.) + background conc.) for acute and chronic
= (0.1(WQC - background conc.) + background conc.) for human health
- WLAs established at the following stream flows: 1Q10 for Acute, 30Q10 for Chronic Ammonia, 7Q10 for Other Chronic, 30Q5 for Non-carcinogens, Harmonic Mean for Carcinogens, and Annual Average for Dioxin. Mixing ratios may be substituted for stream flows where appropriate.

Metal	Target Value (SSTV)	Note: do not use QL's lower than the minimum QL's provided in agency guidance
Antimony	7.0E+03	
Arsenic	9.0E+01	
Barium	na	
Cadmium	1.3E+00	
Chromium III	8.4E+01	
Chromium VI	6.4E+00	
Copper	1.0E+01	
Iron	na	
Lead	2.2E+01	
Manganese	na	
Mercury	8.3E-02	
Nickel	2.4E+01	
Selenium	3.0E+00	
Silver	5.3E+00	
Zinc	9.1E+01	

Mixing Zone Predictions for

Madison POTW

Effluent Flow = .08 MGD
Stream 7Q10 = .32 MGD
Stream 30Q10 = .41 MGD
Stream 1Q10 = .25 MGD
Stream slope = .001 ft/ft
Stream width = 5 ft
Bottom scale = 2
Channel scale = 1

Mixing Zone Predictions @ 7Q10

Depth = .4173 ft
Length = 61.36 ft
Velocity = .2967 ft/sec
Residence Time = .0024 days

Recommendation:

A complete mix assumption is appropriate for this situation and the entire 7Q10 may be used.

Mixing Zone Predictions @ 30Q10

Depth = .4751 ft
Length = 54.35 ft
Velocity = .3193 ft/sec
Residence Time = .002 days

Recommendation:

A complete mix assumption is appropriate for this situation and the entire 30Q10 may be used.

Mixing Zone Predictions @ 1Q10

Depth = .3694 ft
Length = 68.66 ft
Velocity = .2766 ft/sec
Residence Time = .069 hours

Recommendation:

A complete mix assumption is appropriate for this situation and the entire 1Q10 may be used.

4/14/2009 9:47:29 AM

Facility = Madison POTW
Chemical = Ammonia Jun-Nov
Chronic averaging period = 30
WLAa = 33
WLAc = 4
Q.L. = .2
samples/mo. = 4
samples/wk. = 1

Summary of Statistics:

observations = 1
Expected Value = 9
Variance = 29.16
C.V. = 0.6
97th percentile daily values = 21.9007
97th percentile 4 day average = 14.9741
97th percentile 30 day average = 10.8544
< Q.L. = 0
Model used = BPJ Assumptions, type 2 data

A limit is needed based on Chronic Toxicity
Maximum Daily Limit = 8.07068037366524
Average Weekly limit = 8.07068037366525
Average Monthly Limit = 5.51813176437992

The data are:

4/14/2009 9:46:58 AM

Facility = Madison POTW
Chemical = Ammonia Dec-May
Chronic averaging period = 30
WLAa = 180
WLAc = 39
Q.L. = .2
samples/mo. = 4
samples/wk. = 1

Summary of Statistics:

observations = 1
Expected Value = 9
Variance = 29.16
C.V. = 0.6
97th percentile daily values = 21.9007
97th percentile 4 day average = 14.9741
97th percentile 30 day average = 10.8544
< Q.L. = 0
Model used = BPJ Assumptions, type 2 data

No Limit is required for this material

The data are:

6/2/2009 1:52:00 PM

Facility = Madison POTW
Chemical = Copper
Chronic averaging period = 4
WLAa = 28
WLAc = 17
Q.L. = 5
samples/mo. = 1
samples/wk. = 1

Summary of Statistics:

observations = 18
Expected Value = 8.72409
Variance = 11.4352
C.V. = 0.387616
97th percentile daily values = 16.6611
97th percentile 4 day average = 12.2901
97th percentile 30 day average = 9.88540
< Q.L. = 2
Model used = delta lognormal

No Limit is required for this material

The data are:

10.5
13.9
11
7.5
15.1
13.2
0
8.1
6.5
7.7
5.5
5.5
5.4
7.8
7.2
8
4.6
13.7

Facility = Madison POTW
Chemical = Chlorine
Chronic averaging period = 4

WLA_d = 0.019
WLA_c = 0.011
Q.L. = 0.1
samples/mo. = 28
samples/wk. = 7

Summary of Statistics:

observations = 1
Expected Value = .2
Variance = .0144
C.V. = 0.6
97th percentile daily values = .486683
97th percentile 4 day average = .332758
97th percentile 30 day average = .241210
< Q.L. = 0
Model used = BPJ Assumptions, type 2 data

A limit is needed based on Chronic Toxicity
Maximum Daily Limit = 1.60883226245855E-02
Average Weekly limit = 9.8252545713861E-03
Average Monthly Limit = 8.02152773888032E-03

The data are:

0.2

Facility = Madison POTW
Chemical = Zinc
Chronic averaging period = 4

WLA_a = 234.15
WLA_c = 226.83
Q.L. = 52
samples/mo. = 1
samples/wk. = 1

Summary of Statistics:

observations = 10
Expected Value = 96.7049
Variance = 3366.66
C.V. = 0.6
97th percentile daily values = 235.323
97th percentile 4 day average = 160.896
97th percentile 30 day average = 116.631
< Q.L. = 2
Model used = BPJ Assumptions, Type 1 data

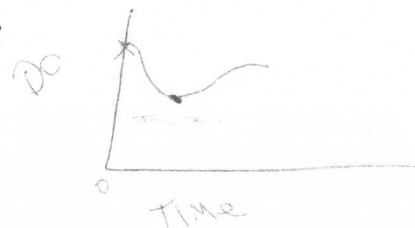
A limit is needed based on Acute Toxicity
Maximum Daily Limit = 234.15
Average Weekly limit = 234.15
Average Monthly Limit = 234.15

The data are:

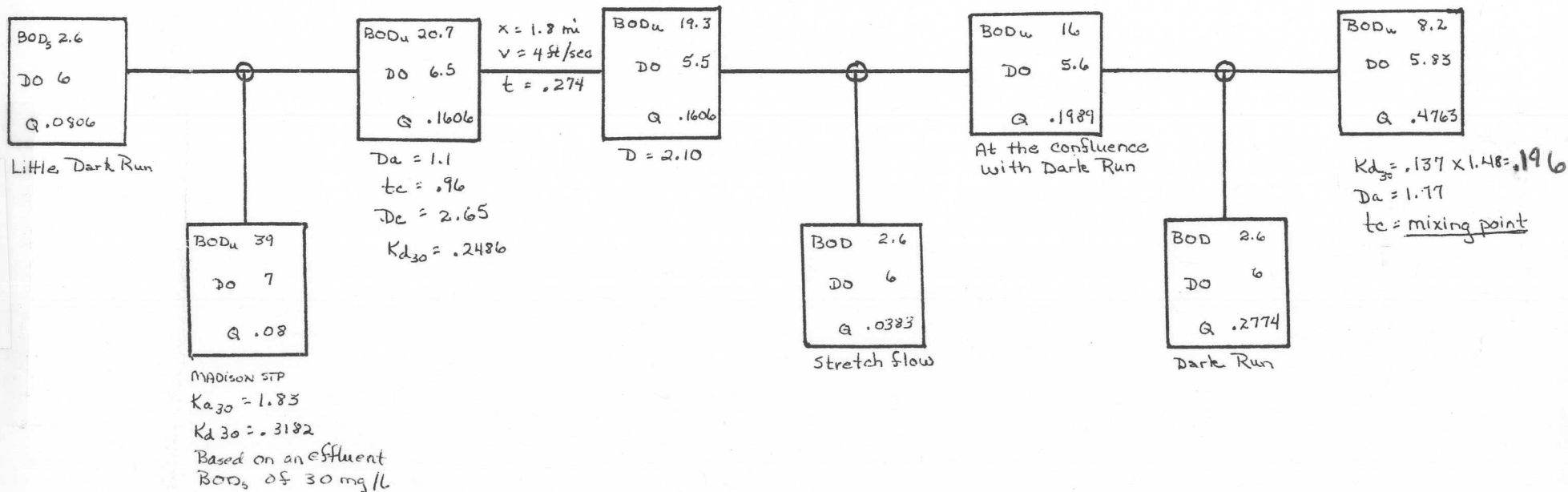
98
95.8
216
151
144
100
118
69.5
51.6
41.5

Madison County: Town of Madison STP Expansion

SAA 3/21/75



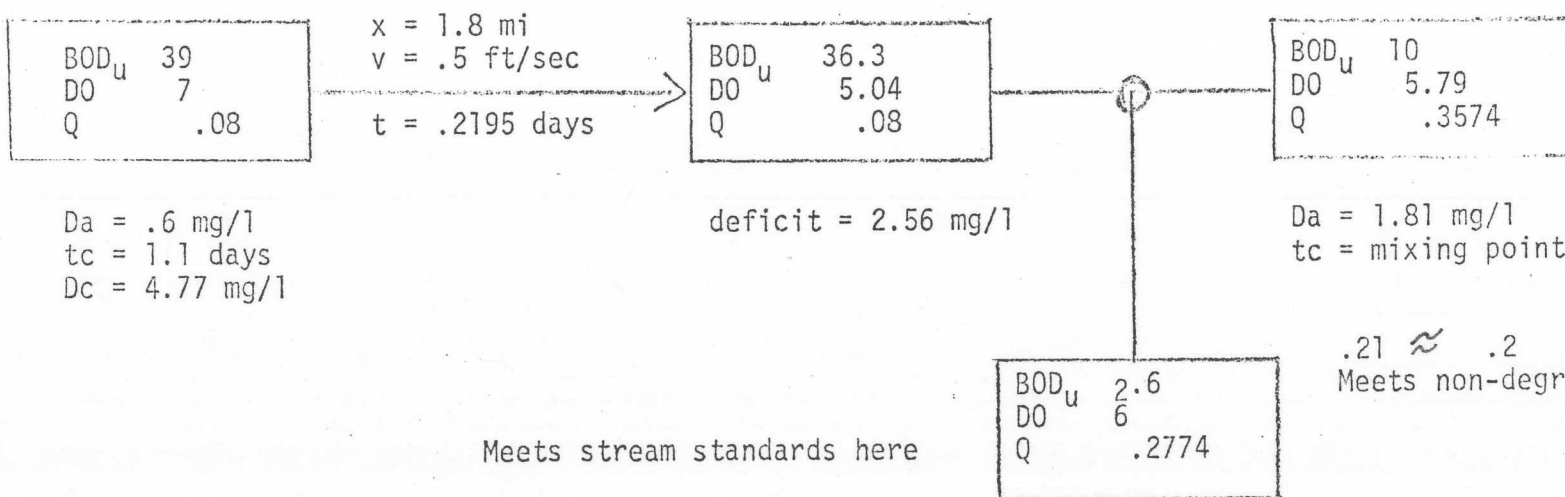
Attachment 5



140032845

TOWN OF MADISON STP EXPANSION SAA 5-2-74

Proposed flow = .08 MGD
 BOD_5 in effluent = 30 mg/l
 $K_{a30} = 1.83 \text{ day}^{-1}$
 $K_{d30} = .3182 \text{ day}^{-1}$



440022843

Public Notice – Environmental Permit

PURPOSE OF NOTICE: To seek public comment on a draft permit from the Department of Environmental Quality that will allow the release of treated wastewater into a water body in Madison County, Virginia.

PUBLIC COMMENT PERIOD: XXX, 2009 to 5:00 p.m. on XXX, 2009

PERMIT NAME: Virginia Pollutant Discharge Elimination System Permit – [Wastewater] issued by DEQ, under the authority of the State Water Control Board

APPLICANT NAME, ADDRESS AND PERMIT NUMBER: Rapidan Service Authority, PO Box 148, Ruckersville, VA 22968, VA0022845

NAME AND ADDRESS OF FACILITY: MADISON POTW, 1033 FISHBACK RD, MADISON, VA 22727

PROJECT DESCRIPTION: Rapidan Service Authority has applied for a reissuance of a permit for the public Madison POTW. The applicant proposes to release treated sewage wastewaters from residential areas at a rate of 0.08 million gallons per day into a water body. The sludge will be disposed in the Maplewood Recycling and Waste Disposal Facility. The facility proposes to release the treated sewage in the Little Dark Run in Madison County in the Rappahannock watershed. A watershed is the land area drained by a river and its incoming streams. The permit will limit the following pollutants to amounts that protect water quality: Total Suspended Solids, Biochemical Oxygen Demand, Ammonia as Nitrogen, Total Recoverable Zinc, E. coli, Dissolved Oxygen, and Total Residual Chlorine.

HOW TO COMMENT AND/OR REQUEST A PUBLIC HEARING: DEQ accepts comments and requests for public hearing by e-mail, fax or postal mail. All comments and requests must be in writing and be received by DEQ during the comment period. Submittals must include the names, mailing addresses and telephone numbers of the commenter/requester and of all persons represented by the commenter/requester. A request for public hearing must also include: 1) The reason why a public hearing is requested. 2) A brief, informal statement regarding the nature and extent of the interest of the requester or of those represented by the requestor, including how and to what extent such interest would be directly and adversely affected by the permit. 3) Specific references, where possible, to terms and conditions of the permit with suggested revisions. DEQ may hold a public hearing, including another comment period, if public response is significant and there are substantial, disputed issues relevant to the permit.

CONTACT FOR PUBLIC COMMENTS, DOCUMENT REQUESTS AND ADDITIONAL INFORMATION: The public may review the documents at the DEQ-Northern Regional Office by appointment.

Name: Alison Thompson

Address: DEQ-Northern Regional Office, 13901 Crown Court, Woodbridge, VA 22193

Phone: (703) 583-3834 E-mail: althompson@deq.virginia.gov Fax: (703) 583-3821

**State "Transmittal Checklist" to Assist in Targeting
Municipal and Industrial Individual NPDES Draft Permits for Review**

Part I. State Draft Permit Submission Checklist

In accordance with the MOA established between the Commonwealth of Virginia and the United States Environmental Protection Agency, Region III, the Commonwealth submits the following draft National Pollutant Discharge Elimination System (NPDES) permit for Agency review and concurrence.

Facility Name:	Town of Madison POTW
NPDES Permit Number:	VA0022845
Permit Writer Name:	Alison Thompson
Date:	April 15, 2009

Major ☐Minor ☒Industrial ☐Municipal ☒**I.A. Draft Permit Package Submittal Includes:**

	Yes	No	N/A
1. Permit Application?	X		
2. Complete Draft Permit (for renewal or first time permit – entire permit, including boilerplate information)?	X		
3. Copy of Public Notice?	X		
4. Complete Fact Sheet?	X		
5. A Priority Pollutant Screening to determine parameters of concern?	X		
6. A Reasonable Potential analysis showing calculated WQBELs?	X		
7. Dissolved Oxygen calculations?	X		
8. Whole Effluent Toxicity Test summary and analysis?			X
9. Permit Rating Sheet for new or modified industrial facilities?			X

I.B. Permit/Facility Characteristics

	Yes	No	N/A
1. Is this a new, or currently unpermitted facility?		X	
2. Are all permissible outfalls (including combined sewer overflow points, non-process water and storm water) from the facility properly identified and authorized in the permit?	X		
3. Does the fact sheet or permit contain a description of the wastewater treatment process?	X		
4. Does the review of PCS/DMR data for at least the last 3 years indicate significant non-compliance with the existing permit?		X	
5. Has there been any change in streamflow characteristics since the last permit was developed?		X	
6. Does the permit allow the discharge of new or increased loadings of any pollutants?		X	
7. Does the fact sheet or permit provide a description of the receiving water body(s) to which the facility discharges, including information on low/critical flow conditions and designated/existing uses?	X		
8. Does the facility discharge to a 303(d) listed water?	X		
a. Has a TMDL been developed and approved by EPA for the impaired water?	X		
b. Does the record indicate that the TMDL development is on the State priority list and will most likely be developed within the life of the permit?	X		
c. Does the facility discharge a pollutant of concern identified in the TMDL or 303(d) listed water?	X		
9. Have any limits been removed, or are any limits less stringent, than those in the current permit?		X	
10. Does the permit authorize discharges of storm water?		X	

I.B. Permit/Facility Characteristics – cont.	Yes	No	N/A
11. Has the facility substantially enlarged or altered its operation or substantially increased its flow or production?		X	
12. Are there any production-based, technology-based effluent limits in the permit?		X	
13. Do any water quality-based effluent limit calculations differ from the State's standard policies or procedures?		X	
14. Are any WQBELs based on an interpretation of narrative criteria?		X	
15. Does the permit incorporate any variances or other exceptions to the State's standards or regulations?		X	
16. Does the permit contain a compliance schedule for any limit or condition?		X	
17. Is there a potential impact to endangered/threatened species or their habitat by the facility's discharge(s)?		X	
18. Have impacts from the discharge(s) at downstream potable water supplies been evaluated?	X		
19. Is there any indication that there is significant public interest in the permit action proposed for this facility?		X	
20. Have previous permit, application, and fact sheet been examined?	X		

Part II. NPDES Draft Permit Checklist

Region III NPDES Permit Quality Checklist – for POTWs (To be completed and included in the record only for POTWs)

II.A. Permit Cover Page/Administration		Yes	No	N/A
1.	Does the fact sheet or permit describe the physical location of the facility, including latitude and longitude (not necessarily on permit cover page)?	X		
2.	Does the permit contain specific authorization-to-discharge information (from where to where, by whom)?	X		

II.B. Effluent Limits – General Elements		Yes	No	N/A
1.	Does the fact sheet describe the basis of final limits in the permit (e.g., that a comparison of technology and water quality-based limits was performed, and the most stringent limit selected)?	X		
2.	Does the fact sheet discuss whether “antibacksliding” provisions were met for any limits that are less stringent than those in the previous NPDES permit?	X		

II.C. Technology-Based Effluent Limits (POTWs)		Yes	No	N/A
1.	Does the permit contain numeric limits for <u>ALL</u> of the following: BOD (or alternative, e.g., CBOD, COD, TOC), TSS, and pH?	X		
2.	Does the permit require at least 85% removal for BOD (or BOD alternative) and TSS (or 65% for equivalent to secondary) consistent with 40 CFR Part 133?	X		
a.	If no, does the record indicate that application of WQBELs, or some other means, results in more stringent requirements than 85% removal or that an exception consistent with 40 CFR 133.103 has been approved?			X
3.	Are technology-based permit limits expressed in the appropriate units of measure (e.g., concentration, mass, SU)?	X		
4.	Are permit limits for BOD and TSS expressed in terms of both long term (e.g., average monthly) and short term (e.g., average weekly) limits?	X		
5.	Are any concentration limitations in the permit less stringent than the secondary treatment requirements (30 mg/l BOD5 and TSS for a 30-day average and 45 mg/l BOD5 and TSS for a 7-day average)?		X	
a.	If yes, does the record provide a justification (e.g., waste stabilization pond, trickling filter, etc.) for the alternate limitations?			X

II.D. Water Quality-Based Effluent Limits		Yes	No	N/A
1.	Does the permit include appropriate limitations consistent with 40 CFR 122.44(d) covering State narrative and numeric criteria for water quality?	X		
2.	Does the fact sheet indicate that any WQBELs were derived from a completed and EPA approved TMDL?		X	
3.	Does the fact sheet provide effluent characteristics for each outfall?	X		
4.	Does the fact sheet document that a “reasonable potential” evaluation was performed?	X		
a.	If yes, does the fact sheet indicate that the “reasonable potential” evaluation was performed in accordance with the State’s approved procedures?	X		
b.	Does the fact sheet describe the basis for allowing or disallowing in-stream dilution or a mixing zone?	X		
c.	Does the fact sheet present WLA calculation procedures for all pollutants that were found to have “reasonable potential”?	X		
d.	Does the fact sheet indicate that the “reasonable potential” and WLA calculations accounted for contributions from upstream sources (i.e., do calculations include ambient/background concentrations)?	X		
e.	Does the permit contain numeric effluent limits for all pollutants for which “reasonable potential” was determined?	X		

II.D. Water Quality-Based Effluent Limits – cont.	Yes	No	N/A
5. Are all final WQBELs in the permit consistent with the justification and/or documentation provided in the fact sheet?	X		
6. For all final WQBELs, are BOTH long-term AND short-term effluent limits established?	X		
7. Are WQBELs expressed in the permit using appropriate units of measure (e.g., mass, concentration)?	X		
8. Does the record indicate that an “antidegradation” review was performed in accordance with the State’s approved antidegradation policy?	X		

II.E. Monitoring and Reporting Requirements	Yes	No	N/A
1. Does the permit require at least annual monitoring for all limited parameters and other monitoring as required by State and Federal regulations?	X		
a. If no, does the fact sheet indicate that the facility applied for and was granted a monitoring waiver, AND, does the permit specifically incorporate this waiver?			
2. Does the permit identify the physical location where monitoring is to be performed for each outfall?	X		
3. Does the permit require at least annual influent monitoring for BOD (or BOD alternative) and TSS to assess compliance with applicable percent removal requirements?			X
4. Does the permit require testing for Whole Effluent Toxicity?			X

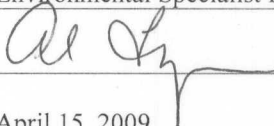
II.F. Special Conditions	Yes	No	N/A
1. Does the permit include appropriate biosolids use/disposal requirements?	X		
2. Does the permit include appropriate storm water program requirements?			X

II.F. Special Conditions – cont.	Yes	No	N/A
3. If the permit contains compliance schedule(s), are they consistent with statutory and regulatory deadlines and requirements?			X
4. Are other special conditions (e.g., ambient sampling, mixing studies, TIE/TRE, BMPs, special studies) consistent with CWA and NPDES regulations?	X		
5. Does the permit allow/authorize discharge of sanitary sewage from points other than the POTW outfall(s) or CSO outfalls [i.e., Sanitary Sewer Overflows (SSOs) or treatment plant bypasses]?		X	
6. Does the permit authorize discharges from Combined Sewer Overflows (CSOs)?		X	
a. Does the permit require implementation of the “Nine Minimum Controls”?			X
b. Does the permit require development and implementation of a “Long Term Control Plan”?			X
c. Does the permit require monitoring and reporting for CSO events?			X
7. Does the permit include appropriate Pretreatment Program requirements?			X

II.G. Standard Conditions	Yes	No	N/A
1. Does the permit contain all 40 CFR 122.41 standard conditions or the State equivalent (or more stringent) conditions?	X		
List of Standard Conditions – 40 CFR 122.41			
Duty to comply	Property rights	Reporting Requirements	
Duty to reapply	Duty to provide information	Planned change	
Need to halt or reduce activity	Inspections and entry	Anticipated noncompliance	
not a defense	Monitoring and records	Transfers	
Duty to mitigate	Signatory requirement	Monitoring reports	
Proper O & M	Bypass	Compliance schedules	
Permit actions	Upset	24-Hour reporting	
		Other non-compliance	
2. Does the permit contain the additional standard condition (or the State equivalent or more stringent conditions) for POTWs regarding notification of new introduction of pollutants and new industrial users [40 CFR 122.42(b)]?	X		

Part III. Signature Page

Based on a review of the data and other information submitted by the permit applicant, and the draft permit and other administrative records generated by the Department/Division and/or made available to the Department/Division, the information provided on this checklist is accurate and complete, to the best of my knowledge.

Name	<u>Alison Thompson</u>
Title	<u>Environmental Specialist II</u>
Signature	<u></u>
Date	<u>April 15, 2009</u>